Alcatel-Lucent OmniSwitch 6855

HARDENED LAN SWITCH

Alcatel-Lucent OmniSwitch™ 6855 Hardened LAN Switch (HLS) models are industrial grade, managed, Gigabit Ethernet switches designed to operate reliably in harsh electrical environments and severe temperatures. This superior, rugged hardware design, coupled with the widely deployed and field-proven Alcatel-Lucent Operating System (AOS), makes the OmniSwitch 6855 ideal for industrial and mission-critical applications that require wider operating temperatures, more stringent EMC/EMI requirements and optimized features set for high security, reliability, performance and easy management.

The target applications for these versatile LAN switches are power utilities, transportation and traffic control systems, industrial factory floor installations, video surveillance systems and outdoor installations, all of which require gigabit backbone connectivity.

FEATURES	BENEFITS
Ruggedized hardware design	Operates at a wider temperature range from -40°C to +75°C, withstands greater shock, vibrations, temperature and EMI/EMC tests
Convection cooling for **fan-less** models or temperature triggered fans for 24 port models	Increased **reliability**, and lower acoustic levels
Power over Ethernet (PoE) support on all copper models	Enables **converged applications** by providing power to IP phones, surveillance cameras, and wireless access points
Redundancy at all levels including power supplies, software and hot swappable small form factor pluggable (SFP) modules	A field upgradeable solution that ensures the network is **highly available** and delivers operating expense savings
Wire-rate switching and routing at gigabit speeds. Advanced services incorporated in the operating system (OS): quality of service (QoS), access control lists (ACL), L2/L3, VLAN stacking, and IPv6	**Outstanding performance** when supporting real-time voice, data, and video applications for converged scalable networks
Extensive security features for network access control, policy enforcement and attack containment	**Fully secures the network** at the edge, at no additional cost
Hardware based virtual routing and forwarding (VRF) support	Enterprise wide **cost reduction** through hardware consolidation to achieve **network segmentation** and security without additional hardware installation.

Alcatel-Lucent OmniSwitch 6855 Models

The OmniSwitch 6855 family offers customers an extensive selection of Gigabit Ethernet fixed configuration switches and power supply options that accommodate most needs. Models offered include industrial-strength PoE and non-PoE models in a 1U form factor.

Fiber models with 10 Gig

OmniSwitch 6855-U10
- Eight SFP ports
- Two RJ45 10/100/1000 copper ports
- Fan-less design

OmniSwitch 6855-U24
- 22 SFP ports
- Two combo ports

OmniSwitch 6855-U24X
- **Two 10Gig** SFP+ ports for stacking or uplinks
- 22 SFP ports
- Two combo ports
- Up to 4 units in a stack

Copper models with POE

Both models support 15.4W/port PoE (compliant with IEEE 802.3af standard).

OmniSwitch 6855-14
- 12 10/100/1000 RJ45 copper ports
- Four PoE capable ports
- Two SFP ports
- Fan-less design

OmniSwitch 6855-24
- 20 10/100/1000 RJ45 copper ports
- Four support PoE
- Four combo ports

Technical specifications

DIMENTIONS	OS6855-U10	OS6855-14	OS6855-24	OS6855-U24	OS6855-U24X
Total 10Gig ports	0	0	0	0	2
Total 10/100/100 BaseT RJ45 ports	2	12	24	2	2
Total SFP connectors	8	2	4	24	24
PoE ports	0	4	4	0	0
Combo ports	0	0	4	2	2
Switch width	8.50 in/21.6 cm	8.50 in/21.6 cm	17.25 in/43.8 cm	17.25 in/43.8 cm	17.25 in/43.8 cm
Switch height	1.73 in/4.4 cm	1.73 in/4.4 cm	1.73 in/4.4 cm	1.73 in/4.4 cm	1.73 in/4.4 cm
Switch depth (no PS shelf attached)	10.25 in/26 cm	10.25 in/26 cm	10.78 in/27.4 cm	10.78 in/27.4 cm	10.78 in/27.4 cm
Switch depth (with PS shelf attached)	17.50 in/44.5 cm	17.50 in/44.5 cm	17.60 in/44.8 cm	17.60 in/44.8 cm	17.60 in/44.8 cm
Switch weight (no PS)	5.28 lb/2.42 kg	5.28 lb/2.42 kg	8.34 lb/3.78 kg	8.34 lb/3.78 kg	11.68 lb/5.3 kg
Switch weight (with one PS and tray)	7.78 lb/3.55 kg	7.78 lb/3.55 kg	11.8 lb/5.35 kg	11.8 lb/5.35 kg	15.14 lb/6.87 kg
OPERATING CONDITIONS	**OS6855-U10**	**OS6855-14**	**OS6855-24**	**OS6855-U24**	**OS6855-U24X**
Operating temperature	-40°C to + 70°C	-40°C to + 70°C	-40°C to + 75°C	-40°C to + 75°C	-40°C to + 70°C
Storage temperature	-40°C to + 85°C	-40°C to + 85°C	-40°C to + 85°C	-40°C to + 85°C	-40°C to + 85°C

Humidity (operating and storage)	5% - 95%	5% - 95%	5% - 95%	5% - 95%	5% - 95%
MTBF*	508942	430389	529644	488705	373980
Fanless design	Yes	Yes	No	No	Yes ***
Acoustic (dB) at <50°C	silent	silent	33	33	silent
Acoustic (dB) – all fans on	n/a	n/a	57	52	n/a
Power consumption ****	25 W	30 W	46 W	49 W	51 W
Heat dissipation ** (BTU/hr)	85.3	102.4	157	167.2	174

* MTBF values calculated at 25C for the switch only
** Sufficient spacing required for airflow and heat dissipation
*** The OS6855-U24X chassis is fanless; The external AC or DC power supplies have fans
**** Power consumption was measured from the AC input power using nominal input voltage of 120VAC and running full traffic on all ports.

Combo ports are ports individually configurable to be 10/100/1000Base-T or 1000Base-X, which support SFP transceivers for short, long and very long distances.
Gigabit fiber interfaces on the OmniSwitch 6855-U10 and OmniSwitch 6855-U24 support Gigabit SFP or 100Base-X SFP optical transceivers. See the full list of supported transceivers at the end of the data sheet.

Power supplies

All OmniSwitch 6855 models support redundant, **hot-swappable AC, DC or PoE** power supplies. The primary as well as the back up power supply units are external which allows for easier maintenance and replacement.
There is no interruption of service when a new power supply is installed or an old one replaced.

Power supplies for OS6855-14 and OS6855-U10

The power supplies for OS6855-U10 and OS6855-14 models come in the form of a **power brick** in either AC or DC variant. A separate power brick provides PoE power and is available for purchase when PoE is required.

POWER SUPPLY MODELS	DESCRIPTION
OS6855-PSS	PSU for OS6855-14 and OS6855-U10; 90-240VAC, 50-60Hz AC; 40W, 12V, AC-DC
OS6855-PSS-P	PSU for PoE on OS6855-14; 66W, 48V PoE, AC-DC
OS6855-PSS-D	PSU for 6855-14 and OS6855-U10; 40W, -48V and 24V input to 12V DC-DC
OS6855-PSS-P-D	PSU for PoE on OS6855-14; 66W, -48V input DC-DC

SPECIFICATION	WEIGHT	DEPTH	WIDTH	HEIGHT
OS6855-PSS OS6855-PSS-P OS6855-PSS-D	1.3 lb (0.65 kg)	5.5 in (14 cm)	3.2 in (8.1 cm)	1.6 in (4.1 cm)
OS6855-PSS-P-D	1.1 lb (0.5 kg)	6.53 in (16.6 cm)	3.15 in (8 cm)	1.73 in (4.4 cm)
Power brick tray	1.35 lb (0.5 kg)	7.5 in (19.1 cm)	8.5 in (21.6 cm)	1.73 in (4.4 cm)

The power supply shelf holds two power bricks and can be mounted either in a side-by-side configuration with the switch for 19in. rack mounting or attached at the back of the switch for bulkhead mounting options.

Power supplies for OmniSwitch 6855-24 and OmniSwitch 6855-U24

The primary as well as the backup power supplies for the OmniSwitch 6855-24 port models are modular and connect to the rear of the unit. A power shelf provided with the unit, can slide into the rear of the switch and is used to hold two power supplies.

POWER SUPPLY MODELS	DESCRIPTION
OS6855-PSL	PSU for OS6855-U24; 90-240VAC, 50-60Hz AC; 80W, 12V, AC-DC
OS6855-PSL-P	PSU for OS6855-24; 90-240VAC, 50-60Hz AC; 160W, 48V PoE, 12V, AC-DC
OS6855-PSL-D	PSU for OS6855-24 and OS6855-U24; 80W, -48V/12V DC-DC
OS6855-PSL-DL	PSU for OS6855-24 and OS6855-U24; 80W, 24V/12V DC-DC

SPECIFICATION	WEIGHT	DEPTH	WIDTH	HEIGHT
Power supply (AC, DC or PoE)	2.00lb (1.00kg)	6.5 in (16.5 cm)	6.3 in (16 cm)	1.73 in (4.4 cm)
Power supply tray	1.52lb (0.60kg)	7.0 in (17.8 cm)	13.88 in (35.3 cm)	1.73 in (4.4 cm)

Any power supply can be remotely connected using a cable, which enables rack mounting using the mounting ears provided with the unit. This feature allows for space sensitive installations requiring reduced-depth (for example, in a wall-mounted cabinet).

Indicators

Per-port LEDs: link/activity/PoE
System LEDs: OK (switch HW/SW status)
PS1/PS2: primary and/or redundant power supply status

Compliance and certifications

Commercial

EMI/EMC

• FCC CRF Title 47 Subpart B (Class A and Class B* limits)
• VCCI (Class A and Class B* limits
• AS/NZS 3548 (Class A and Class B*)
• CE marking for European countries (Class A and Class B*)
• EN 55022: 2006 (Emission Standard)
• EN 61000-3-3: 1995
• EN 61000-3-2: 2006
• EN 55024: 1998 (Immunity Standards)
- EN 61000-4-2: 1995+A1: 1998
- EN 61000-4-3: 1996+A1: 1998
- EN 61000-4-4: 1995
- EN 61000-4-5: 1995
- EN 61000-4-6: 1996
- EN 61000-4-8: 1994
- EN 61000-4-11: 1994
• IEEE802.3: Hi-Pot Test (2250 V DC on all Ethernet ports)
EN 50121-4

*NEBs***

GR-63-CORE (temperature, humidity, altitude, contamination)
GR-1089-CORE Issue 4 (section 2-3)
GR-1089-CORE Issue 4 (section 3.2, 4-10)

Industrial

IEC 60870-2-2 (operational temperature)
IEC 60068-2-1 (temperature type test - cold)
IEC 60068-2-2 (temperature type test - hot)
IEC 60721-3-1: Class 1K5 (storage temperature)
IEC 68-2-30: 5% to 95% non-condensing humidity
IEC 60255-21-2 (mechanical shock)
IEC 60255-21-1 (vibration)

EMI/EMC

EN 61131-2
EN 61000-6-4 :2007 (emission)
EN 61000-6-2 :2005 (immunity)
EN 55024: 1998 (Immunity)
-IEC 61000-4-3
-IEC 61000-4-12
-IEC 61000-4-16
-IEC 61000-4-17
-IEC 61000-4-29
IEC 60255-5
IEC 61850-3 (Electric Power Substations)
IEC 62236-4:2008- Railway applications: Electromagnetic compatibility – Part 4
EN 50121-4:2006 for Class A device
IEEE 1613 (C37.90.x)
C37.90.3 (ESD)
C37.90.2 (Radiated RFI)
IEEE1613 C37.90.1 (Fast Transient)
IEEE1613 C37.90.1 (Oscillatory)
IEEE1613 C37.90 (H.V. Impulse)
IEEE1613 C37.90 (Dielectric Strength)

Military

MIL-STD-810F (shock and vibration)
MIL-STD-901D (shock)**
MIL-STD-167-1 (vibration)**
MIL-STD-810F**: Methods 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 512, 514, 515, 516, 520, 521
MIL-STD-461E**: CE101, CE102, CS101, CS114, CS115, CS116, RE101, RE 102, RS101, RS103

Safety agency certifications

• US UL 60950
• IEC 60950-1:2001; all national deviations
• EN 60950-1: 2001; all deviations
• CAN/CSA-C22.2 No. 60950-1-03
• NOM-019 SCFI, Mexico
• AS/NZ TS-001 and 60950:2000, Australia
• UL-AR, Argentina
• UL-GS Mark, Germany
• EN 60825-1 Laser, EN 60825-2 Laser
• CDRH Laser

* Note: Class A with UTP cables and Class B with STP cables
** Contact for availability

Detailed Product Features

Simplified manageability

Management interfaces

- Intuitive Alcatel-Lucent CLI with familiar interface reducing training costs
- Easy to use, point-and-click web based element manager (WebView) with built-in help for easy configuration
- Integrated with Alcatel-Lucent OmniVista™ Network Management System
- Full configuration and reporting using SNMPv1/2/3 across all OmniSwitch families to facilitate third party NMS integration

- Remote telnet management or secure shell access using SSH
- File upload using TFTP, FTP, SFTP, or SCP for faster configuration
- Human-readable ASCII-based config files for off-line editing and bulk configuration

Monitoring and troubleshooting

- Local (on the flash) and remote server logging: Syslog and command log
- Port based mirroring for troubleshooting and lawful interception, supports four sessions with multiple sources-to-one destination
- Policy based mirroring - Allows selection of the type of traffic to mirror by using QoS policies
- Remote port mirroring that facilitates passing mirrored traffic through the network to a remotely connected device.
- Port monitoring feature that allows capture of Ethernet packets to a file, or for on-screen display to assist in troubleshooting
- sFlow v5 and RMON: for advanced monitoring and reporting capabilities for statistics, history, alarms, and events
- IP tools: ping and traceroute
- IEEE 802.1ag Ethernet OAM: Connectivity Fault Management (L2 ping and linktrace)
- IEEE 802.3ah Ethernet in the First Mile (EFM) for link monitoring , remote fault detection and loopback control (L1 ping)
- Uni-Directional Link Detection (UDLD): detects and disables unidirectional links on fiber optic interfaces.

Network configuration

- Auto-negotiating 10/100/1000 ports automatically configure port speed and duplex setting
- Auto MDI/MDIX automatically configures transmit and receive signals to support straight through and crossover cabling
- BootP/DHCP client allows auto-config of switch IP information for simplified deployment
- DHCP relay to forward client requests to a DHCP server
- Alcatel-Lucent Mapping Adjacency Protocol (AMAP) for building topology maps
- IEEE 802.1AB Link Layer Discovery Protocol (LLDP) with MED extensions for automated device discovery
- GARP VLAN Registration Protocol (GVRP) for 802.1Q-compliant VLAN pruning and dynamic VLAN creation
- Auto QoS for switch management traffic as well as traffic from Alcatel-Lucent IP phones
- Network Time Protocol (NTP) for network wide time synchronization

Resiliency and high availability

- ITU-T G.8032 Ethernet Ring Protection designed for loop protection and fast convergence times (sub 50 ms) in ring topologies.
- Ring Rapid Spanning Tree (RRSTP) optimized for ring topology to provide less than 100ms convergence time
- IEEE 802.1s Multiple Spanning Tree Protocol: encompasses IEEE 802.1D STP and IEEE 802.1w Rapid Spanning Tree Protocol
- Per-VLAN spanning tree (PVST) and Alcatel-Lucent 1x1 STP mode
- IEEE 802.3ad Link Aggregation Control Protocol (LACP) and static LAG groups across modules is supported
- Virtual Router Redundancy Protocol (VRRP) to provide highly available routed environments
- Bidirectional Forwarding Detection (BFD) for fast failure detection and reduced re-convergence times in a routed environment.
- Broadcast and multicast storm control to avoid degradation in overall system performance
- Redundant and hot-swappable power supplies, transceivers modules offering uninterruptable service
- Dual image and dual configuration files storage provides backup
- Stacking capability (OS6855-U24X only)for virtual chassis redundancy. Up to 10 km fault tolerant remote stacking supported.

Advanced security

Access control

- AOS Access Guardian framework for comprehensive user policy based Network Access Control (NAC)
- Autosensing 802.1X multi-client, multi-VLAN
- MAC based authentication for non-802.1x hosts
- Web based authentication (Captive Portal) – A customizable web portal residing on the switch that can be used for authenticating supplicants as well as non-supplicants.
- Group mobility rules and “guest” VLAN support
- Authenticated VLAN that challenges users with username and password and supports dynamic VLAN access based on user
- The host integrity check (HIC) agent on each switch makes it a HIC enforcer and facilitates endpoint device control for company policy compliance; quarantine and remediation are supported as required.
- User Network Profile (UNP) – simplify NAC management and control by dynamically providing pre-defined policy configuration to authenticated clients—VLAN, ACL, BW, HIC
- SSH for secure CLI session with PKI support
- Centralized RADIUS and LDAP user authentication

Containment, monitoring and quarantine

- Support for Alcatel-Lucent Quarantine Manager and quarantine VLAN
- Learned Port Security (LPS) or MAC address lockdown - secures the network access on user or trunk ports based on MAC address
- DHCP Snooping, DHCP IP Spoof protection
- TACACS+ client allows for authentication authorization and accounting with a remote TACACS+ server
- Embedded traffic anomaly detection (TAD) monitors traffic patterns typical for worm-like viruses and either shuts down the port or reports to the management system
- ARP poisoning detection
- Access control lists to filter out unwanted traffic including denial of service attacks; Flow based filtering in hardware (L1-L4)
- Support of Microsoft Network Access Protection (NAP)
- BPDU blocking – automatically shuts down user ports if a STP BPDU packet is seen to prevent topology loops
- STP Root Guard - prevents edge devices from becoming Spanning Tree Protocol root nodes

Converged networks

PoE

- The PoE models support Alcatel-Lucent IP phones and WLAN access points, as well as any IEEE 802.3af compliant end device.
- Configurable per port PoE priority and max power for power allocation
- Dynamic PoE allocation delivers only the power needed by the attached device up to the total power budget for most efficient power consumption.

QoS
- Priority queues: eight hardware-based queues per port for flexible QoS management
- Traffic prioritization: Flow-based QoS with internal and external (a.k.a., remarking) prioritization
- Bandwidth management: flow based bandwidth management, ingress rate limiting; egress rate shaping per port
- Queue management: configurable scheduling algorithm: Strict Priority (SP), Weighted Round Robin (WRR) and Deficit Round Robin (DRR)
- Congestion avoidance: Support for end-to-end head-of-line (E2E-HOL) blocking protection
- Auto QoS for switch management traffic as well as traffic from Alcatel-Lucent IP phones

L3 Routing and Multicast

IPv4 / IPv6
- Multiple VRF for network segmentation
- Static routing
- RIP v1 & v2, RIPng
- OSPF v2, v3
- BGP v4
- ISIS
- VRRP v2, v3
- DHCP relay (including generic UDP relay)
- ARP

Multicast
- IGMPv1/v2/v3 snooping to optimize multicast traffic
- MLD snooping
- PIM-SM / PIM-DM
- DVMRP

Metro Ethernet access

- Ethernet services support per IEEE 802.1ad Provider Bridge
  - ¬ Transparent LAN Services with Service VLAN (SVLAN) and Customer VLAN (CVLAN) concept
  - ¬ Ethernet network-to-network interface (NNI) and user network interface (UNI) services
  - ¬ Service Access Point (SAP) profile identification
  - ¬ CVLAN to SVLAN translation and mapping
- Ethernet OAM compliant with IEEE 802.1ag version 7.0 for connectivity fault management and IEEE 802.3ah EFM
- Private VLAN feature for user traffic segregation
- DHCP Option 82 – configurable relay agent information
- IP Multicast VLAN (IPMVLAN) for optimized multicast replication at the edge saving network core resources
- Optimized Ethernet access services delivery
  - ¬ network bandwidth protection against overload of video traffic
  - ¬ multicast streams isolation from multiple content provides over the same interface
- MEF 9 and 14 certified
- Managed by Alcatel-Lucent 5620 Service Aware Manager

Supported Standards

IEEE standards

• IEEE 802.1D (STP)
• IEEE 802.1p (CoS)
• IEEE 802.1Q (VLANs)
• IEEE 802.1ad (Provider Bridge) QinQ(VLAN stacking)
• IEEE 802.1ag (Connectivity Fault Management)
• IEEE 802.1s (MSTP)
• IEEE 802.1w (RSTP)
• IEEE 802.1X (Port Based Network Access Protocol)
• IEEE 802.3i (10BaseT)
• IEEE 802.3u (Fast Ethernet)
• IEEE 802.3x (Flow Control)
• IEEE 802.3z (Gigabit Ethernet)
• IEEE 802.3ab (1000BaseT)
• IEEE 802.3ac (VLAN Tagging)
• IEEE 802.3ad (Link Aggregation)
• IEEE 802.3af (Power-over-Ethernet)
• IEEE 802.3ae (10G Ethernet)

ITU-T standards

• ITU-T G.8032: Draft (June 2007) Ethernet Ring Protection

IETF standards

IPv4
• RFC 2003 IP/IP tunneling
• RFC 2784 GRE tunneling

OSPF
• RFC 1253/1850/2328 OSPF v2 and MIB
• RFC 1587/3101 OSPF NSSA Option
• RFC 1765 OSPF Database Overflow
• RFC 2154 OSPF MD5 Signature
• RFC 2370/3630 OSPF Opaque LSA
• RFC 3623 OSPF Graceful Restart

RIP
• RFC 1058 RIP v1
• RFC 1722/1723/2453/1724 RIP v2 and MIB
• RFC 1812/2644 IPv4 Router Requirement
• RFC 2080 RIPng for IPv6

BGP
• RFC 1269/1657 BGP v3 & v4 MIB
• RFC 1403/1745 BGP/OSPF Interaction
• RFC 1771-1774/2842/2918/3392 BGP v4
• RFC 1965 BGP AS Confederations
• RFC 1966 BGP Route Reflection
• RFC 1997/1998 BGP Communities Attribute
• RFC 2042 BGP New Attribute
• RFC 2385 BGP MD5 Signature
• RFC 2439 BGP Route Flap Damping
• RFC 2545 BGP-4 Multiprotocol Extensions for IPv6 Inter-Domain Routing
• RFC 2796 BGP Route Reflection
• RFC 2858 Multiprotocol Extensions for BGP-4
• RFC 3065 BGP AS Confederations

IP Multicast
• RFC 1075 DVMRP
• RFC 1112 IGMP v1
• RFC 2236/2933 IGMP v2 and MIB
• RFC 2362 PIM-SM
• RFC 2365 Multicast
• RFC 2715/2932 Multicast Routing MIB
• RFC 2934 PIM MIB for IPv4
• RFC 3376 IGMPv3
• RFC 5060 Protocol Independent Multicast MIB
• RFC 5132 IP Multicast MIB
• RFC 5240 PIM Bootstrap Router MIB

IPv6
• RFC 1886 DNS for IPv6
• RFC 2292/2373/2374/2460/2462
• RFC 2461 NDP
• RFC 2463/2466 ICMP v6 and MIB
• RFC 2452/2454 IPv6 TCP/UDP MIB
• RFC 2464/2553/2893/3493/3513
• RFC 3056 IPv6 Tunneling
• RFC 3542/3587 IPv6
• RFC 3595 TC for Flow Label
• RFC 4007 IPv6 Scoped Address Architecture
• RFC 4193 Unique Local IPv6 Unicast Addresses

Manageability
• RFC 1350 TFTP Protocol
• RFC 854/855 Telnet and Telnet options
• RFC 1155/2578-2580 SMI v1 and SMI v2
• RFC 1157/2271 SNMP
• RFC 1212/2737 MIB and MIB-II
• RFC 1213/2011-2013 SNMP v2 MIB
• RFC 1215 Convention for SNMP Traps
• RFC 1573/2233/2863 Private Interface MIB
• RFC 1643/2665 Ethernet MIB
• RFC 1901-1908/3416-3418 SNMP v2c
• RFC 2096 IP MIB
• RFC 2570-2576/3411-3415 SNMP v3
• RFC 2616 /2854 HTTP and HTML
• RFC 2667 IP Tunneling MIB
• RFC 2668/3636 IEEE 802.3 MAU MIB

• RFC 2674 VLAN MIB
• RFC 3414 User based Security model
• RFC 4251 Secure Shell Protocol architecture
• RFC 4252 The Secure Shell (SSH) Authentication Protocol
• RFC 4878 OAM Functions on Ethernet-Like Interfaces
• RFC 959/2640 FTP

Security

• RFC 1321 MD5
• RFC 2104 HMAC Message Authentication
• RFC 2138/2865/2868/3575/2618 RADIUS Authentication and Client MIB
• RFC 2139/2866/2867/2620 RADIUS Accounting and Client MIB
• RFC 2228 step
• RFC 2284 PPP EAP
• RFC 2869/2869bis RADIUS Extension

Quality of services

• RFC 896 Congestion Control
• RFC 1122 Internet Hosts
• RFC 2474/2475/2597/3168/3246 DiffServ
• RFC 3635 Pause Control

Others

• RFC 791/894/1024/1349 IP and IP / Ethernet
• RFC 792 ICMP
• RFC 768 UDP
• RFC 793/1156 TCP/IP and MIB
• RFC 826/903 ARP and Reverse ARP
• -RFC 919/922 Broadcasting internet datagram
• RFC 925/1027 Multi LAN ARP / Proxy ARP
• RFC 950 Subnetting
• RFC 951 Bootp
• RFC 1151 RDP
• RFC 1191 Path MTU Discovery
• RFC 1256 ICMP Router Discovery
• RFC 1305/2030 NTP v3 and Simple NTP
• RFC 1493 Bridge MIB
• RFC 1518/1519 CIDR
• RFC 1541/1542/2131/3396/3442 DHCP
• RFC 1757/2819 RMON and MIB
• RFC 2131/3046 DHCP/BootP Relay
• RFC 2132 DHCP Options
• RFC 2251 LDAP v3
• RFC 2338/3768/2787 VRRP and MIB
• RFC 3060 Policy Core
• RFC 3176 sFlow
• RFC 3021 Using 31-bit prefixes

OmniSwitch 6855 Ordering

PART NUMBER	DESCRIPTION
OmniSwitch 6855 Models	
OS6855-14 OS6855-14D	L3 fixed configuration fan-less switch in a 1U form factor. It has 12 RJ-45 connectors individually configurable to 10/100/1000BaseT, four of which are PoE capable and two SFP ports which support various distances. The bundle comes with OS6855-PSS or OS6855-PSS-D power supply respectively
OS6855-U10 OS6855-U10D	L3 fixed configuration fan-less switch in a 1U form factor. It has two RJ-45 connectors individually configurable to 10/100/1000BaseT, and eight SFP ports which support various distances. The bundle comes with OS6855-PSS or OS6855-PSS-D power supply respectively
OS6855-24 OS6855-24DL OS6855-24D	L3 fixed configuration switch in a 1U form factor. It has 20 RJ-45 connectors individually configurable to 10/100/1000BaseT, four of which provide PoE and four combo ports. On the combo ports, either copper or fiber can be used on a one-for-one basis. The bundle comes with OS6855-PSL-P, OS6855-PSL-D or OS6855-PSL-DL power supply respectively.
OS6855-U24 OS6855-U24DL OS6855-U24D	L3 fixed configuration switch in a 1U form factor. It has 22 SFP ports which support various distances, and two combo ports. On the combo ports, either RJ-45 connectors individually configurable to 10/100/1000BaseT, or fiber SFP can be used on a one-for-one basis. The bundle comes with OS6855-PSL OS6855-PSL-DL or OS6855-PSL-D power supply respectively
OS6855-U24X OS6855-U24XDL OS6855-U24XD	L3 fixed configuration switch in a 1U form factor. It has two 10 Gig SFP+ ports, 22 SFP ports which support various distances, and two combo ports. On the combo ports, either RJ-45 connectors individually configurable to 10/100/1000BaseT, or fiber SFP can be used on a one-for-one basis. The 10Gig SFP+ ports can be used either as uplinks or as stacking ports. The bundle comes with OS6855-PSL OS6855-PSL-DL or OS6855-PSL-D power supply respectively
TRANSCEIVERS	All optical transceivers qualified for OmniSwitch 6855 operate at wider operating temperature range than the corresponding commercial types.
iSFP-10G-SR	10 Gigabit industrial optical transceiver (SFP+). Supports multimode fiber over 850nm wavelength (nominal) with an LC connector. Typical reach of 300m.
iSFP-10G-LR	10 Gigabit industrial optical transceiver (SFP+). Supports single mode fiber over 1310nm wavelength (nominal) with an LC connector. Typical reach of 10 Km
iSFP-GIG-LH70	1000BaseLH industrial transceiver. Supports single mode fiber over 1550nm wavelength (nominal) with an LC connector. Typical reach of 70km.
iSFP-GIG-LH40	1000BaseLH industrial transceiver Supports single mode fiber over 1310 nm wavelength (nominal) with an LC connector. Typical reach of 40 Km.
iSFP-GIG-LX	1000BaseLX industrial transceiver Supports single mode fiber over 1310 nm wavelength (nominal) with an LC connector. Typical reach of 10 Km.
iSFP-GIG-SX	1000BaseSX industrial transceiver. Supports multimode fiber over 850 nm wavelength (nominal) with an LC connector. Typical reach of 300m.
iSFP-GIG-T	1000Base-T Gigabit industrial ethernet Transceiver (SFP MSA) - Supports category 5, 5E, and 6 copper cabling up to 100m. SFP supports 10/100/1000 Mbit/s and full-duplex mode
iSFP-GIG-BX-U	1000Base-BX SFP transceiver with an LC type of interface. Supports single mode fiber optic on a single strand link up to 10 km. Transmits 1310 nm and receives 1490 nm optical signal.
iSFP-GIG-BX-D	1000Base-BX SFP transceiver with an LC type of interface. Supports single mode fiber optic on a single strand link up to 10 km. Transmits 1490 nm and receives 1310 nm optical signal.
iSFP-100-MM	100BaseFX Industrial transceiver with an LC type interface. This transceiver is designed for use over multimode fiber optic cable.
iSFP-100-SM15	100BaseFX Industrial transceiver with an LC type interface. This transceiver is designed for use over single mode fiber optic cable up to 15KM.
iSFP-100-SM40	100BaseFX Industrial transceiver with an LC type interface. This transceiver is designed for use over single mode fiber optic cable up to 40KM.
iSFP-100-BX-U	100BaseBX Industrial transceiver with an SC type interface. This bi-directional transceiver is designed for use over single mode fiber optic on a single strand link up to 20KM point-to-point. This transceiver is normally used in the client (ONU) transmits

	1310nm and receives 1550nm optical signal
iSFP-100-BX-D	100BaseBX Industrial SFP transceiver with an SC type interface. This bi-directional transceiver is designed for use over single mode fiber optic on a single strand link up to 20KM point-to-point. This transceiver is normally used in the central office (OLT) transmits 1550nm and receives 1310nm optical signal

Service and Support

Warranty

Limited lifetime hardware warranty: Limited to the original owner, and will be provided for up to five years after the product's End-of-Sales announcement.

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